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Scott A. Abfalter

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EXAMINER

WANG, JUE S

ART UNIT

PAPER NUMBER

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/659,695	Applicant(s) ABFALTER ET AL.	
	Examiner JUE S. WANG	Art Unit 2193	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 May 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3 and 6-38 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 6-38 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-3 and 6-38 have been examined.
2. Claims 4 and 5 were cancelled in Amendment dated 5/21/2008.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-3 and 6-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Aghera et al. (US 2004/0098715 A1, hereinafter Aghera), in view of Simionescu et al. (US 2003/0084337 A1, hereinafter Simionescu).

5. As per claim 1, Aghera teaches the invention as claimed, including a method for installing software to software-defined radio equipment comprising the steps of:

transferring software to a software-defined radio device from a software server, said software server remotely located with respect to said software-defined radio device (see Fig 1, [0002], [0022]-[0024]);

storing said software to a portion of a data store associated with said software defined radio device, said portion of said data store not being used as a storage for currently running software (see [0031], [0032], [0050], [0057], [0058]);

transferring a selection specifying a version of software to be loaded by said software-defined radio device during a restart of said software-defined radio device (see [0026], [0043], [0053], [0058]-[0060]); and

loading the selected software to said software-defined radio device during a restart of said software-defined radio device (see [0038], [0056]).

Aghera does not explicitly teach transferring a selection specifying whether the transferred software or currently running software will be loaded by said software-defined radio device during a restart of said software-defined radio device.

Simionescu teaches a method of providing remote control over the boot mechanism of a host machine (see abstract, [0028]), including transferring a selection specifying whether a transferred software or currently running software will be loaded by the host machine during a restart of the host machine (see [0048], [0049], [0069], [0086]).

It would have been obvious to one of ordinary skill in the art at the time of the invention to have modified Aghera to transfer a selection specifying whether the transferred software or currently running software will be loaded by said software-defined radio device during a restart of said software-defined radio device as taught by Simionescu because it allows an administrator to load a new image in a host machine, and if something goes awry with the new image, the administrator can boot the prior image and diagnose the problem off-line (see [0069] of Simionescu).

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6. As per claim 2, Aghera further teaches the step of automatically reverting from to a previous software version upon a fault detection in loading the at least one of the transferred software or said currently running software (see [0055], [0059]).

7. As per claim 3, Aghera further teaches monitoring said transferring and loading step (see [0028], [0049], [0053]-[0055]).

8. As per claim 6, Aghera further teaches said selection identifies a software version (see [0026], [0047], [0058]).

9. As per claim 7, Aghera does not explicitly teach transferring and loading software to a second software-defined radio device as claimed.

Simionescu teaches transferring software to a second device (see [0048], [0049], [0066], [0067]).

It would have been obvious to one of ordinary skill in the art at the time the invention to have modified Aghera to send the software to a second device as taught by Simionescu because this would ensure that multiple devices are all running the same version of software.

10. As per claim 8, Aghera further teaches providing an error indication if a fault is detected in at least one of said transferring step and said loading step (see [0041]).

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11. As per claim 9, Aghera further teaches said transferred software comprises a plurality of software components (see [0032]).

12. As per claim 10, Aghera further teaches a version indicator accessible from a remote location, said version indicator identifying software which is currently loaded on said software-defined radio device (see [0026], [0045], [0053]; EN: the operator would be capable of seeing the version).

13. As per claim 11, Aghera further teaches providing a software listing accessible from a remote location, said software listing identifying software currently available on said data store (see [0026], [0045], [0053]).

14. As per claim 12, Aghera further teaches storing said transferred software to a second data store associated with said software-defined device (see [0050]).

15. As per claim 13, Aghera further teaches said second data store is nonvolatile (see [0050]; EN: EEPROM is non-volatile memory).

16. As per claim 14, Aghera further teaches the transferring step occurs while said software-defined radio device continues to perform software-defined radio functions (see [0054]; EN: As the download is OTA, the radio must still perform wireless radio functionality during the transfer of the updates).

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17. As per claim 15, Aghera further teaches that the software server is a computer operatively connected to said software-defined radio device via a communications network (see [0024]).

18. As per claim 16, Aghera teaches the invention as claimed, including a method for installing software to software-defined radio equipment, comprising the steps of:

receiving to a software-defined radio device software from a software server, said software server remotely located with respect to said software-defined radio device (see Fig 1, [0002], [0022]-[0024]);

storing said software to a portion of a data store associated with said software-defined radio device, said portion of said data store not being used as a storage for currently running software (see [0031], [0032], [0050], [0057], [0058]);

receiving to said software-defined radio device a selection identifying a version of the software to be loaded by said software-defined radio device during a restart of said software-defined radio device (see [0026], [0043], [0053], [0058]-[0060]);

loading the selected software (see [0038], [0056]); and

verifying said loading step (see Fig 11, [0059]).

Aghera does not explicitly teach transferring a selection specifying whether the transferred software or currently running software will be loaded by said software-defined radio device during a restart of said software-defined radio device.

Simionescu teaches a method of providing remote control over the boot mechanism of a host machine (see abstract, [0028]), including transferring a selection specifying whether a

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transferred software or currently running software will be loaded by the host machine during a restart of the host machine (see [0048], [0049], [0069], [0086]).

It would have been obvious to one of ordinary skill in the art at the time of the invention to have modified Aghera to transfer a selection specifying whether the transferred software or currently running software will be loaded by said software-defined radio device during a restart of said software-defined radio device as taught by Simionescu because it allows an administrator to load a new image in a host machine, and if something goes awry with the new image, the administrator can boot the prior image and diagnose the problem off-line (see [0069] of Simionescu).

19. As per claim 17, Aghera teaches automatically reverting from said at least one of said transferred software and said currently running software to a previous software version upon a fault being detected in said loading step (see [0055], [0059]).

20. As per claim 18, Aghera teaches providing an error indication upon said fault detection (see [0041]).

21. As per claim 19, Aghera teaches monitoring said receiving step and providing an error indication if a fault is detected in said receiving step (see [0041], [0049]).'

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22. As per claims 20-24, these claims recite limitations that are substantially similar to the limitations of claims 6 and 10-13. Therefore, they are rejected using the same reasons as claims 6 and 10-13.

23. As per claim 25, Aghera does not teach decompressing the software after receiving the software.

Simionescu teaches decompressing a software at the host machine after receiving the software (see [0066]).

It would have been obvious to one of ordinary skill in the art at the time the invention to have modified Aghera to compress and decompress the transferred software as taught by Simionescu because compression is a well known technique in the art to reduce the size of the software being transferred to reduce download time and bandwidth.

24. As per claim 26, this claim recites limitations that are substantially similar to the limitations of claim 14. Therefore, it is rejected using the same reasons as claim 14.

25. As per claim 27, Aghera teaches the invention as claimed, including a system for installing software to software-defined radio equipment comprising:

a software server for transferring software to a software-defined radio device from a location remotely located with respect to said software-defined radio device (see Fig 1, [0002], [0022]-[0024]);

a man-machine interface associated with said software server for receiving from a system operator a selection identifying a version of the software to be loaded at a next startup of said software-defined radio device (see [0026], [0043], [0053], [0058]-[0060]);

a data store associated with said software-defined radio device for storing said software, said software stored on a portion of said data store which is not being used to provide currently running software (see [0031], [0032], [0050], [0057], [0058]); and

a processor programmed to:

load a selected one of said transferred software and said currently running software to said software-defined radio device during a restart of said software-defined radio device (see [0038], [0056]); and

automatically revert from said selected one of said transferred software and said currently running software to a previous software version if a fault occurs in said loading of said selected software (see [0055], [0059]).

Aghera does not explicitly teach transferring a selection specifying whether the transferred software or currently running software will be loaded by said software-defined radio device during a restart of said software-defined radio device.

Simionescu teaches a method of providing remote control over the boot mechanism of a host machine (see abstract, [0028]), including transferring a selection specifying whether a transferred software or currently running software will be loaded by the host machine during a restart of the host machine (see [0048], [0049], [0069], [0086]).

It would have been obvious to one of ordinary skill in the art at the time of the invention to have modified Aghera to transfer a selection specifying whether the transferred software or

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currently running software will be loaded by said software-defined radio device during a restart of said software-defined radio device as taught by Simionescu because it allows an administrator to load a new image in a host machine, and if something goes awry with the new image, the administrator can boot the prior image and diagnose the problem off-line (see [0069] of Simionescu).

26. As per claims 28 and 29, these system claims recite limitations that are substantially similar to the limitations recited in claims 3 and 7. Therefore, they are rejected using the same reasons as claims 3 and 7.

27. As per claim 30, Aghera does not teach a compression application for compressing the software prior to said software being transferred.

Simionescu teaches compressing a software prior to the software being transferred (see [0066]).

It would have been obvious to one of ordinary skill in the art at the time the invention to have modified Aghera to compress and decompress the transferred software as taught by Simionescu because compression is a well known technique in the art to reduce the size of the software being transferred to reduce download time and bandwidth.

28. As per claims 31-37, these system claims recite limitations that are substantially similar to the limitations recited in claims 9-15. Therefore, they are rejected using the same reasons as claims 9-15.

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29. As per claim 38, the limitations recited in this method claim are substantially similar to the limitations recited in claim 27. Therefore, it is rejected using the same reasons as claim 27.

Response to Remarks

30. Rejection of Claims 1-3 and 6-38 under 35 U.S.C. § 103(a):

31. As per independent claims 1, 16, and 27, Applicants' arguments have been fully considered but are moot in light of the new grounds of rejection.

Conclusion

32. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jue S. Wang whose telephone number is (571) 270-1655. The examiner can normally be reached on M-Th 7:30 am - 5:00pm (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lewis Bullock can be reached on 571-272-3759. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Lewis A. Bullock, Jr./
Supervisory Patent Examiner, Art Unit 2193

Jue Wang
Examiner
Art Unit 2193